

Fig. 1

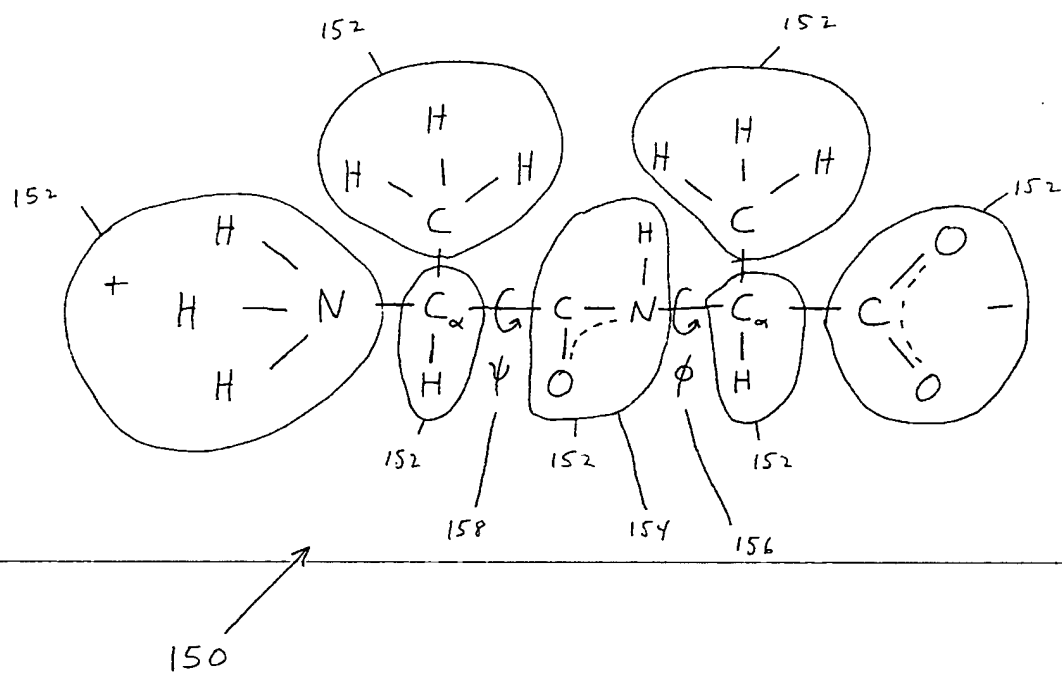
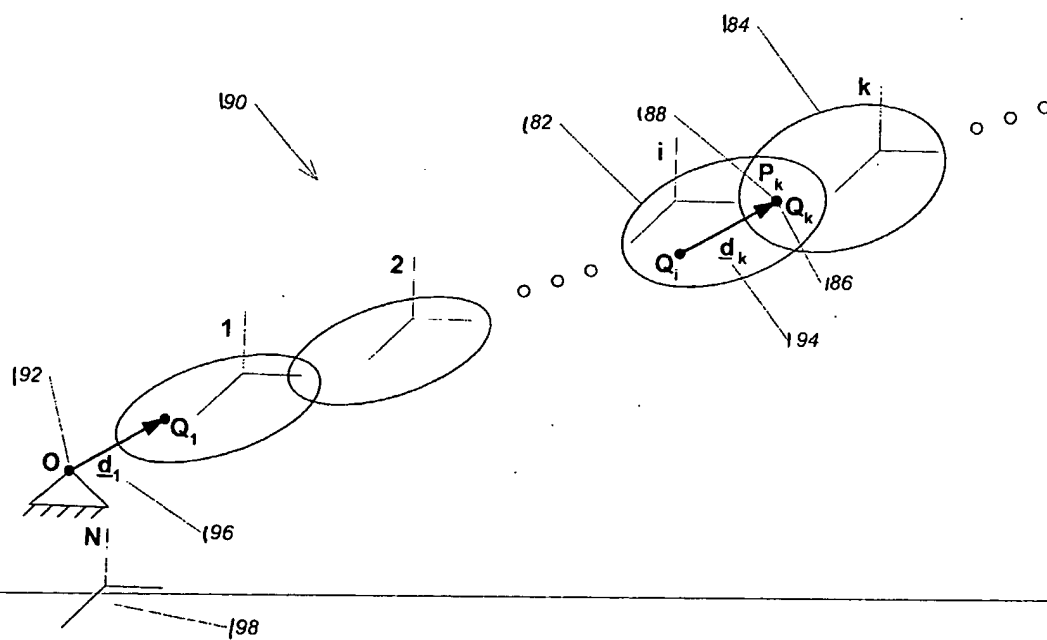
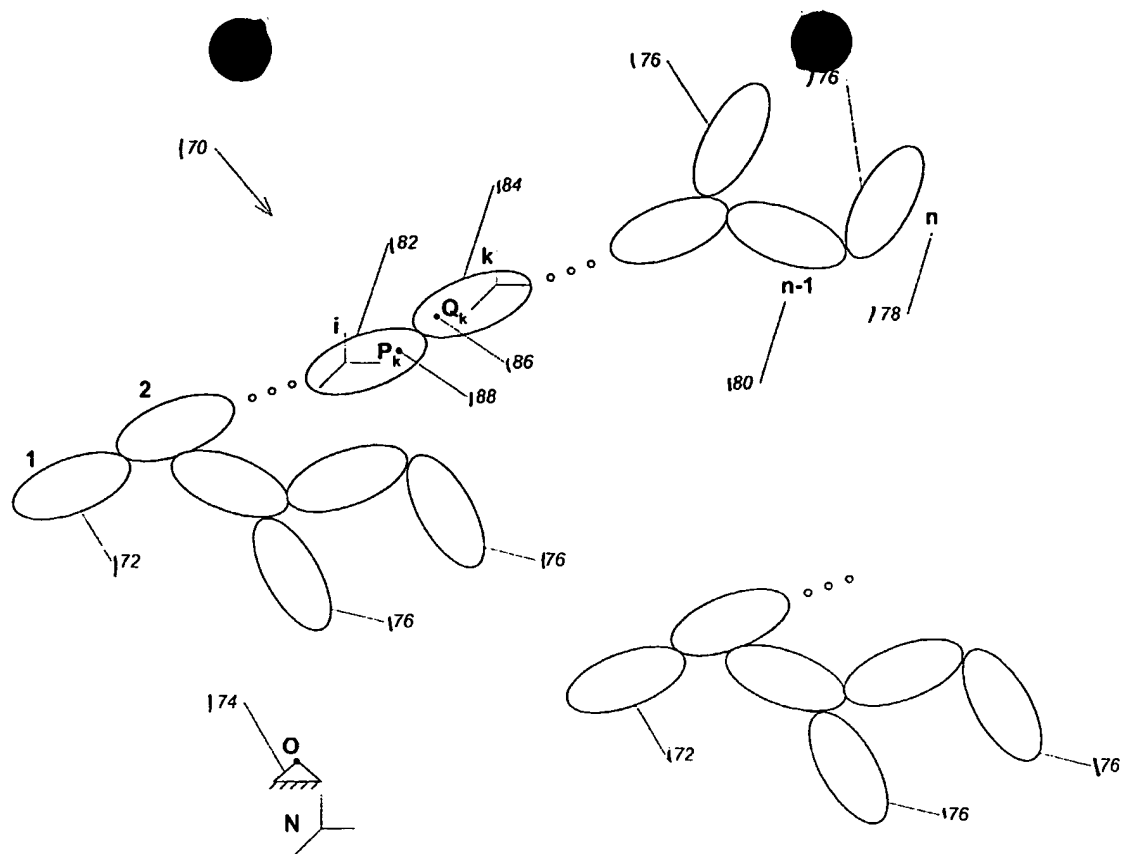
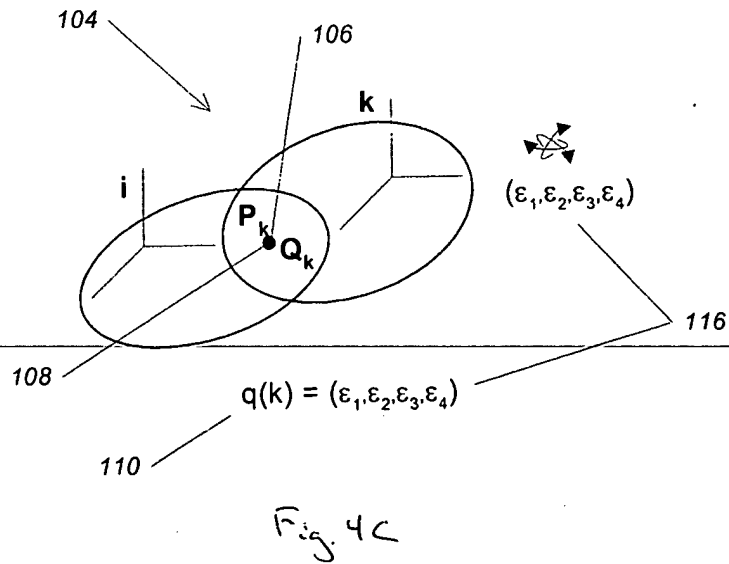
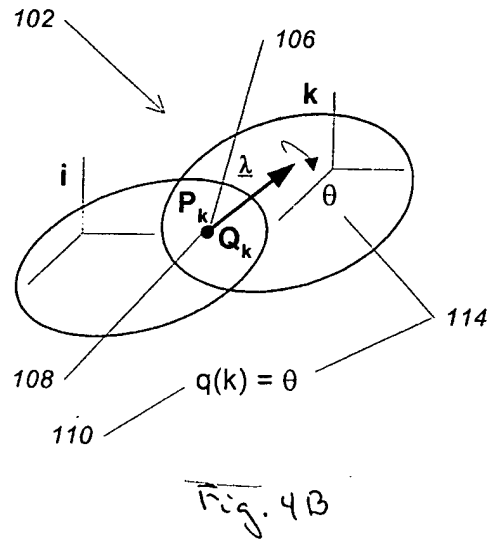
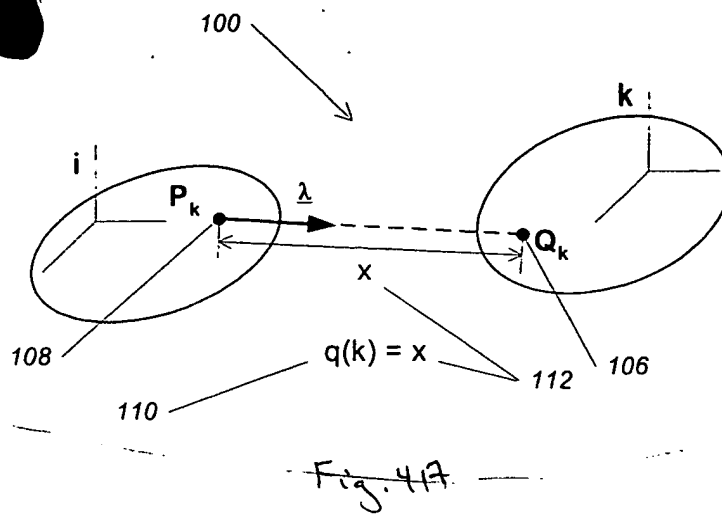


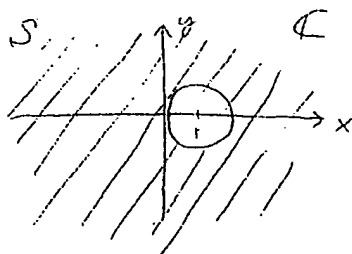
Fig. 3





Implicit Euler

$$R(z) = \frac{1}{1-z}$$



$S \supset \mathbb{C}^-$
A-stable

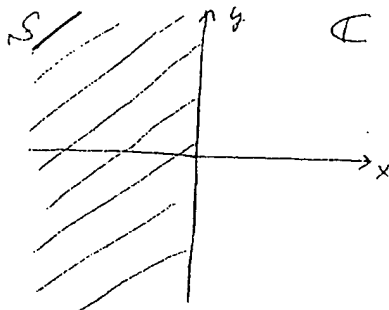
Fig. 5A

$$\lim_{z \rightarrow \infty} R(z) = 0$$

L-stable

Implicit Midpoint

$$R(z) = \frac{1 + z/2}{1 - z/2}$$



$S \supset \mathbb{C}^-$
A-stable

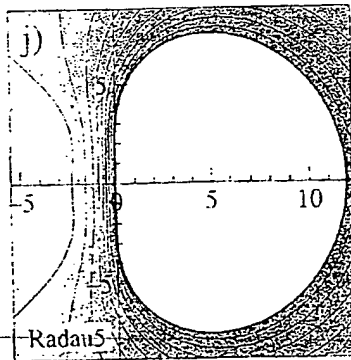
Fig. 5B

$$\lim_{z \rightarrow \infty} R(z) \neq 0$$

NOT L-stable

Radau 5

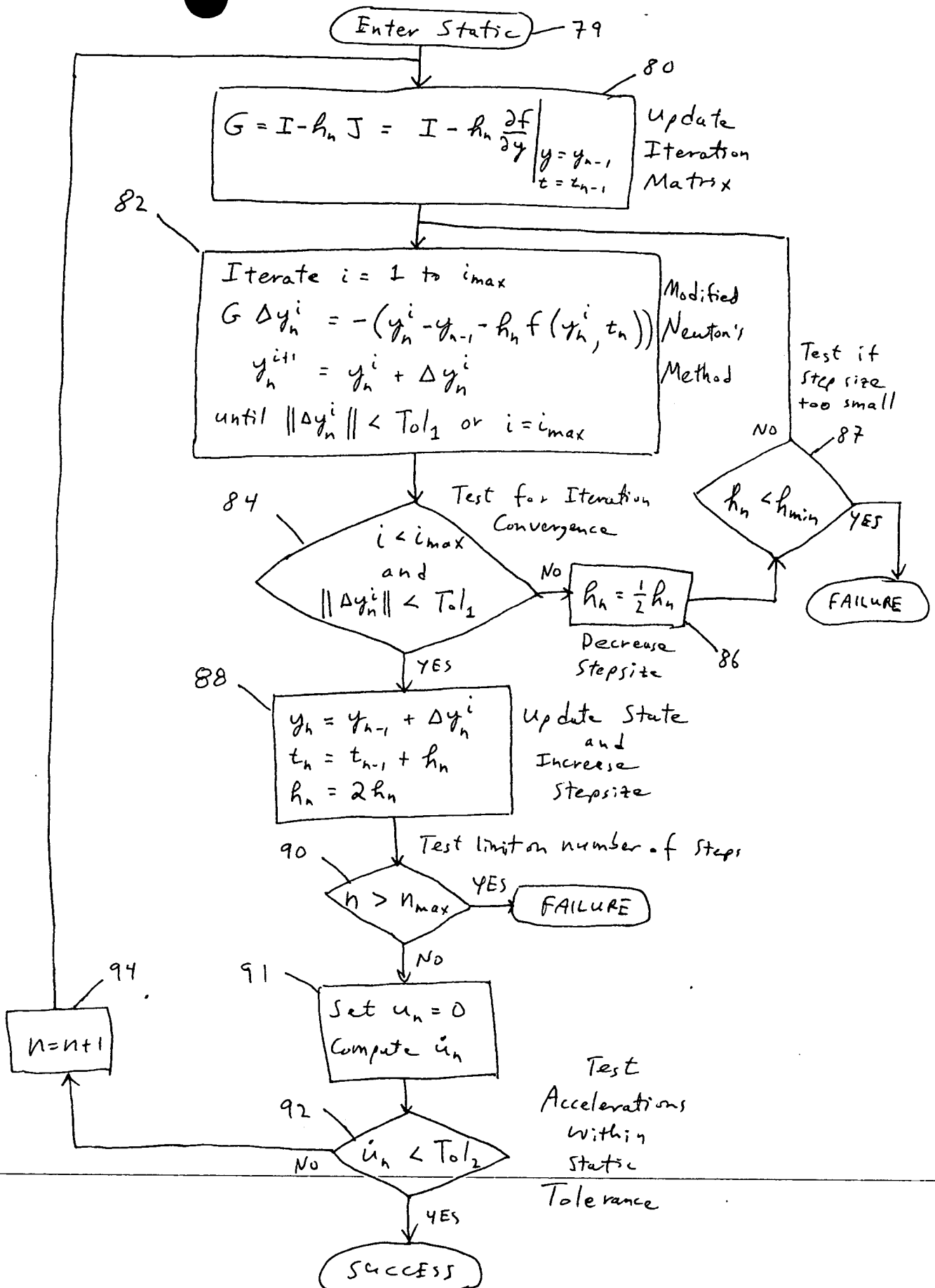
$$R(z) = \frac{1 + 2z/5 + z^2/20}{1 - 3z/5 + 3z^2/20 - z^3/60}$$



$$\lim_{z \rightarrow \infty} R(z) = 0$$

L-stable

Fig. 5C



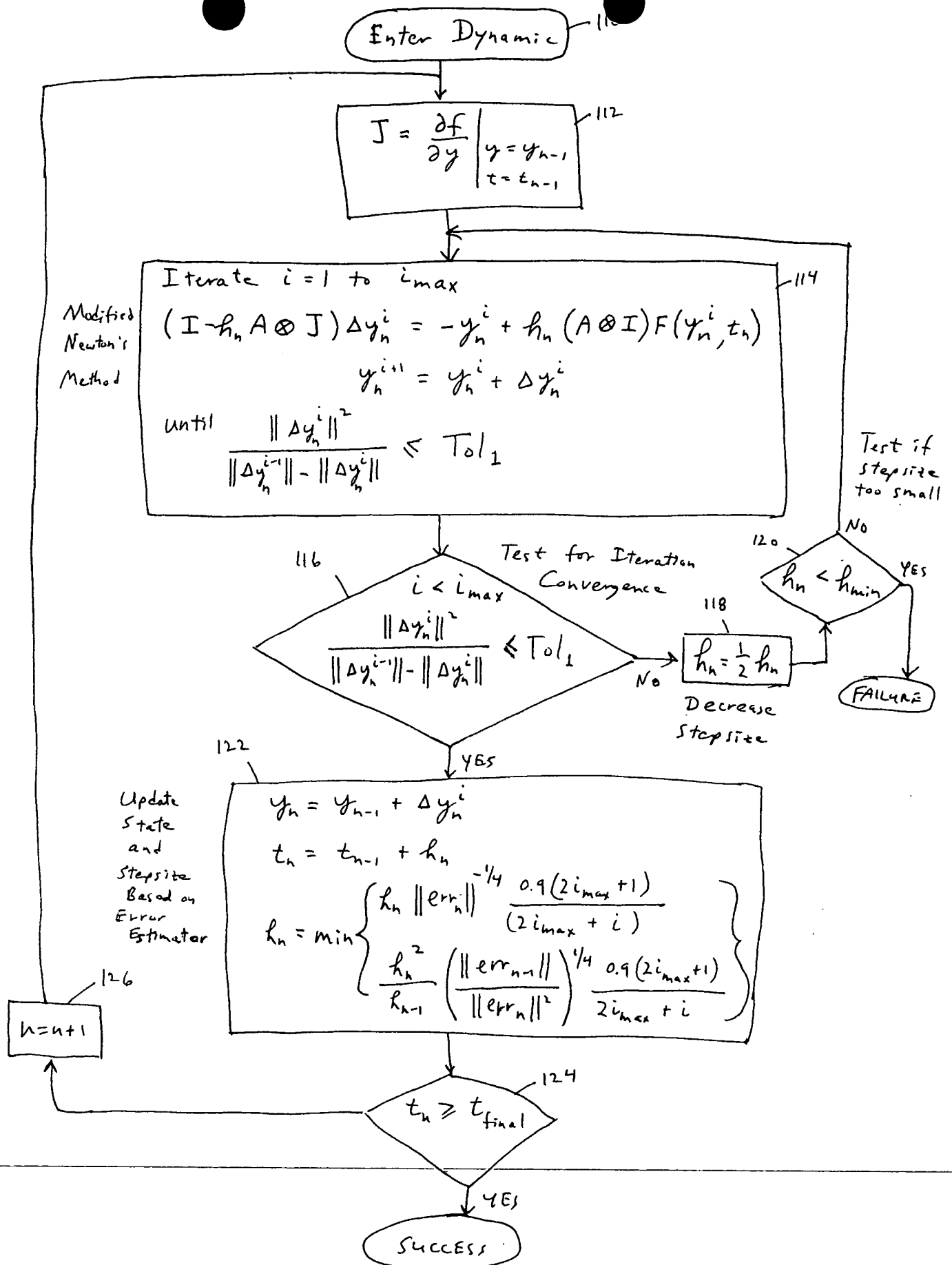


Fig. 7

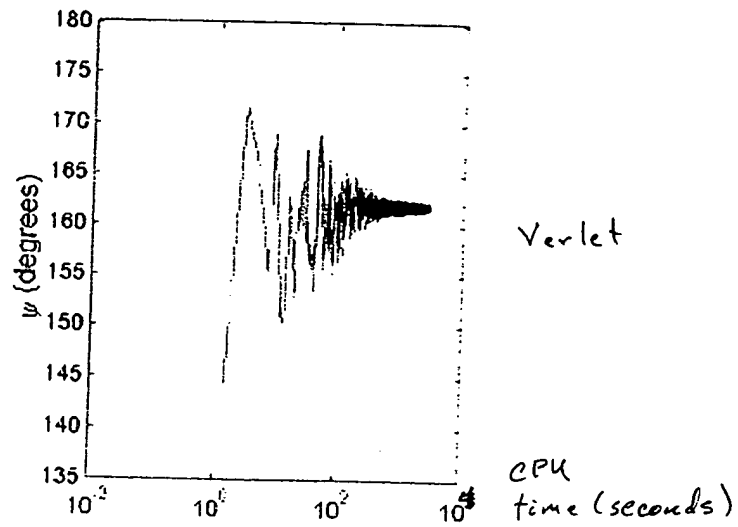


Fig. 9A

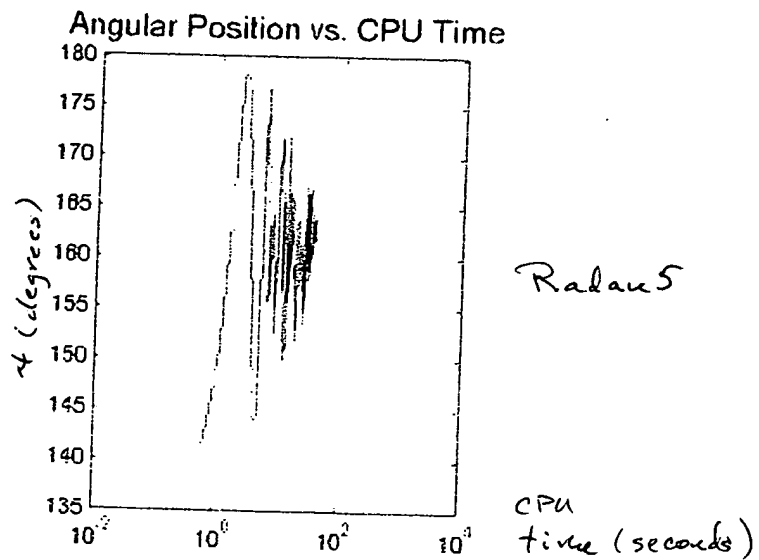
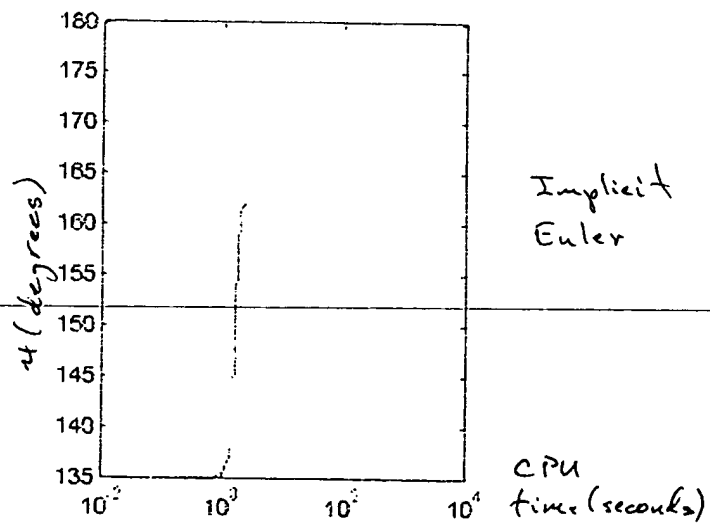
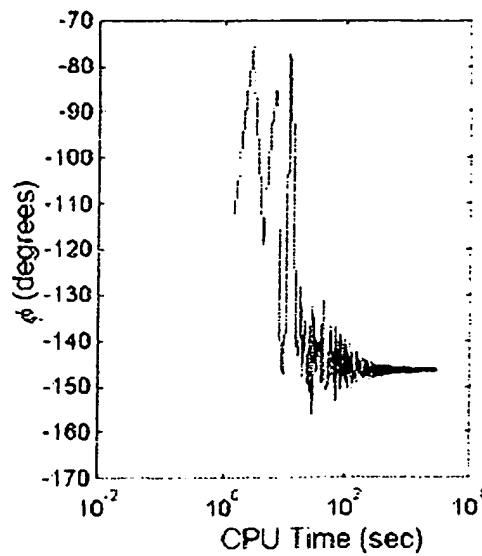


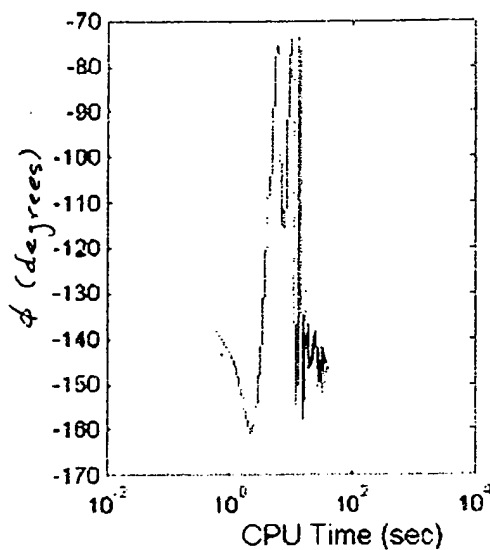
Fig. 9B





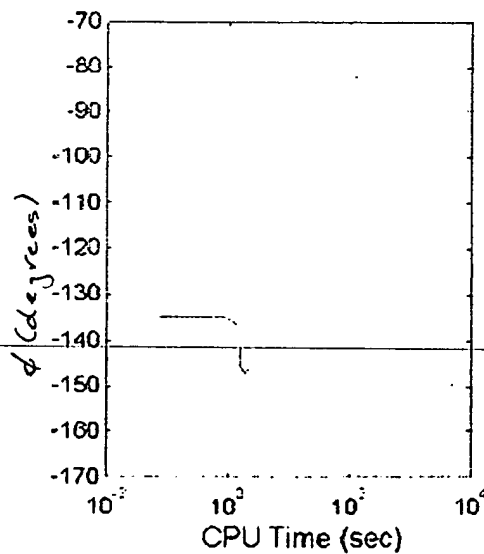
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Fig. 9D



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Fig. 9E



Implicit
Euler

